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VASCULAR DISEASE

CAROTID REVASCULARIZATION IMMEDIATELY PRIOR TO URGENT CARDIAC SURGERY: CLINICAL OUTCOMES ASSOCIATED WITH THE CHOICE OF CAROTID ARTERY STENTING (CAS) OR ENDARTERECTOMY (CEA) FROM THE NCDR-CARE REGISTRY

ACC Poster Contributions
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Background: The optimal modality of carotid revascularization prior to cardiac surgery is not known. While patients undergoing CEA have carotid cross-clamping and frequently undergo general anesthesia, CAS can cause significant hypotension and requires antiplatelet agents. We aim to compare procedural and 30-day outcomes associated with the choice to use CEA versus CAS in patients undergoing carotid revascularization prior to urgent cardiac surgery.

Methods: Retrospective evaluation of patients undergoing carotid revascularization between Jan, 2005 and June, 2009 who were included in the National Cardiovascular Database Registry, Carotid Artery Revascularization and Endarterectomy Registry (NCDR-CARE). Patients whose indication for CEA or CAS was the need for urgent cardiac surgery within 30 days were included. Baseline characteristics and hospital, procedural, and 30-day events (death, myocardial infarction (MI), and stroke) were compared between those undergoing CEA and CAS. A Cox proportional hazards regression model using propensity matching to adjust for baseline differences was used to determine hazard ratios for adverse outcomes between CEA and CAS at 30 days.

Results: There were 339 patients who met study criteria, of whom 200 underwent CAS and 139 CEA. The adjusted risk factors for 30-day events were heart failure history (hazard ratio (HR) = 3.8, 95% confidence interval (CI) 1.5 - 9.3), acute evolving stroke (HR 13.3, 95% CI 3.7 - 47.1). The adjusted 30-day HR for CEA compared to CAS was 2.3 (95% CI 0.92 - 5.9). Patients with left main disease had worse outcomes if they underwent CEA, compared to CAS (relative risk 4.9, 95% CI 1.5-16.9), but were similar for other subsets.

Conclusions: In the NCDR-CARE registry, patients with heart failure and an acute evolving stroke had significantly adjusted higher hospital and 30-day rates of death, stroke, and MI. Although selection bias cannot be completely accounted for, there was a non-significant trend toward higher events among patients undergoing CEA compared to CAS. Patients with left-main coronary disease may have better outcomes with CAS.